

**REMARKS**

The Examiner has required restriction under 35 U.S.C. § 121 between the following inventions:

Group I: Claims 1-27 and 29-32, drawn to a gypsum board, and classified in class 442, subclass 180; and

Group II: Claim 28, drawn to a process for manufacturing an article, and classified in class 162, subclass 145.

The inventions of group II and group I are said to be related as process of making and product made. It is further said that the product as claimed can be made by another and materially different process such as pre-manufacturing the hydraulic set material layer and first and second facers, and then laminating the layers together simultaneously.

During a telephone conversation on December 17, 2004 with applicant's attorney Robert D. Touslee, the invention of Group I, i.e. claims 1-27 and 29-32, was provisionally elected, without traverse, for further prosecution on the merits. Applicant hereby confirms the election, without traverse, that the invention of Group I, claims 1-27 and 29-32 be further prosecuted on the merits. Claim 28 has accordingly been withdrawn by the Examiner; claims 1-27 and 29-32 remain pending in this application.

In accordance with the Examiner's suggestion, claims 1-8, 22, 29-30, and 32 have been amended for the sake of clarity to delete the word "continuous" from the expression

“chopped continuous glass fiber” in each instance. Appreciation is expressed for the Examiner’s constructive suggestion with respect to this feature of applicant’s claims.

Claim 16 has been amended for the sake of clarity and to more particularly emphasize the patentable distinctions of applicant’s invention over the prior art. As amended, claim 16 recites a fibrous mat comprising an effective amount of at least one of a flame retardant, a biocide, a fungicide, and mixtures thereof.

Each of the amendments to claims 1-8, 16, 22, 29-30, and 32 is clearly supported by the original specification; particularly at page 6, lines 12-14; page 7, line 33 to page 8, line 2; and page 10, lines 13-24. Consequently, no new matter has been added.

Applicant’s invention, as recited by remaining claims 1-27 and 29-32, as amended, is directed to a nonwoven, fibrous mat comprising chopped glass fibers having a relatively small range of average fiber diameters, and a gypsum board faced with such a mat. In various embodiments, the gypsum board exhibits a combination of desirable structural and functional features that render it fire resistant and easily painted or otherwise given an aesthetically pleasing finish after installation with a minimum of surface preparation required. The mat has a high permeability, permitting easy extraction of excess water ordinarily present during slurry-based manufacture of gypsum or other hydraulic set board. Surprisingly and unexpectedly, the use of fibers having average fiber diameters ranging from about 9.5 to 12.5  $\mu\text{m}$  produces a mat that allows gypsum board faced therewith to have a smoother surface than boards made with mats employing either larger or smaller diameter fibers. It is especially surprising and significant that the aforementioned 9.5 to

12.5  $\mu\text{m}$  fibers result in smoother board than that obtained with fibers having a smaller diameter.

Claims 1-32 were rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Inasmuch as claim 28 was withdrawn as being directed to a non-elected invention, it is presumed that the inclusion of claim 28 in the aforementioned rejection was inadvertent. Accordingly, the rejection under 35 USC 112, second paragraph, will be discussed with respect to remaining claims 1-27 and 29-32.

In particular, the Examiner has pointed to the limitation of "chopped continuous glass fibers" required by originally presented claims 1-8, 22, 27, 29-30, and 32. As set forth above, said claims have been amended in accordance with the Examiner's suggestion to delete the word "continuous." It is respectfully submitted that any lack of clarity resulting from the expression "chopped continuous glass fibers" has thereby been obviated.

With respect to claim 16, the Examiner has indicated that the term "effective amounts", when used with reference to fine particles of limestone, glass, clay, coloring pigments, biocide, fungicide, intumescent material, or mixtures thereof, prevents comparison of claim 16 to the prior art, because it would be unknown what amounts would be considered "effective amounts."

It is established law that a claim reciting "an effective amount" of a substance does not *per se* violate the requirements of 35 USC 112, second paragraph. In particular, a claim employing the expression "an effective amount" of a given substance has been held to satisfy the requirement of 35 USC 112, second paragraph, if a person of ordinary skill

would be able to determine from the disclosure, in its entirety, what is an effective amount of the given substance to accomplish a particular recited function. *In re Watson*, 517 F.2d 465, 477, 186 USPQ 11 (C.C.P.A. 1975) and *Ex parte Skuballa et al.*, 12 U.S.P.Q. 2d 1570, 1989 WL 274384. In the present instance, amended claim 16 recites an effective amount of at least one of a flame retardant, a biocide, a fungicide, and mixtures thereof. Applicant respectively submits that one of ordinary skill would be able to determine what is an effective amount of the foregoing ingredients, particularly in light of the teaching of the present specification that a preferred gypsum board contains sufficient flame resistance to comply with ASTM Standard E84, Class 1 and sufficient biocide or fungicide to resist fungal growth, as delineated by ASTM Standard D3274. See page 10, lines 11-23 of the specification. It is further submitted that a skilled artisan would recognize the function of the substances "a flame retardant," "a fungicide," and "a biocide" as being inherently specified by the nomenclature used.

In view of the amendment of claims 1-8, 16, 22, 27, 29-30, and 32 and the foregoing remarks, it is submitted that the rejection of claims 1-32 as being indefinite has been obviated, and that amended claims 1-27 and 29-32 satisfy the statutory requirements of 35 U.S.C. §112, second paragraph, by particularly pointing out and distinctly claiming the subject matter which applicant regards as the invention. For these reasons, it is submitted that basis underlying the Examiner's rejection of claims 1-27 and 29-32, as amended, has been obviated.

Accordingly, reconsideration of the rejection of claims 1-32 under 35 U.S.C. §112, second paragraph, as being indefinite, is respectfully requested.

Claims 1-3, 7-15, 17-18, 21-24, 27, 29, and 32 were rejected under 35 USC 102(b) as being anticipated by US Patent 5,772,846 to Jaffee, which provides a thermoformable nonwoven fibrous mat having properties said to make it particularly suited for a facer on insulating gypsum board.

Applicant respectfully submits that the gypsum board delineated by amended claims 1-3, 7-15, 17-18, 21-24, and 27; the fibrous mat recited by amended claim 29; and the hydraulic set board of amended claim 32 are not disclosed by Jaffee. While Jaffee admittedly discloses, in general terms, a nonwoven fibrous mat for use as a facer on gypsum insulating board, applicant maintains that Jaffee fails to disclose or suggest the particular mat recited by applicant, let alone a gypsum board faced with mat delineated by the foregoing claims, as amended.

With respect to claims 1, 19-22, 27, and 32, and referencing col. 2, lines 1-15, the Examiner has pointed to Jaffee as teaching a nonwoven fibrous mat for use as a facer on gypsum insulating board. The Examiner has equated the latex binder of Jaffee (col. 2, lines 35-45) with applicant's resinous binder. In addition, the Examiner has indicated that col. 3, lines 35-40 of Jaffee teachings glass fibers having an average fiber diameter from about 9 to 20 microns.

By way of contrast, applicant's claims 1, 27, and 32 (and claims 19-22 dependent on claim 1) recite a nonwoven fibrous mat comprising a web composed of chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ . Significantly, the Examiner has not pointed to any disclosure or suggestion of such a range. In addition to the 9-20 micron fibers identified by the Examiner at col. 3, line 39, Jaffee is submitted

to disclose preferred fibers having fiber diameters of 10-16 microns (col. 3, line 40); 16 microns (col. 3, line 42, col. 5, line 1, and claim 13); 13 microns (col. 6, line 67); and 15 microns (col. 3, line 8). Jaffee is further submitted to teach the preferability of mat comprised of a fiber blend including both glass fibers of the aforementioned diameters and organic microfibers. Clearly, none of the chopped glass fiber diameter disclosed by Jaffee is present within the 9.5 to 12.5  $\mu\text{m}$  range recited by claims 1, 27, and 32. Neither does any mat species disclosed or suggested by Jaffee incorporate fibers having an average fiber diameter falling within applicant's range of about 9.5 to 12.5  $\mu\text{m}$ . Even less is there any disclosure or suggestion of gypsum or hydraulic set board comprising mat having a web of fibers of such diameter.

Accordingly, it is submitted that claims 1, 27, and 32 (as well as claims 2-3, 7-15, 17-18, and 21-24 dependent thereon), are not properly subject to an anticipation rejection. Absent disclosure of the claimed numerical range, or of at least one species falling within that range, it is respectfully submitted that there has not been established a case of *prima facie* anticipation by Jaffee, as would be required for a rejection under 35 USC 102. *In re Wertheim*, 541 F.2d 264-265, 191 USPQ 98 (C.C.P.A. 1976).

It is further significant that there is no disclosure or suggestion in Jaffee concerning any of the beneficial properties afforded by the board and mat of the present invention. As set forth by the specification, preferred embodiments of applicant's gypsum board provide, *inter alia*, flame resistance (page 10, lines 19-22) and high permeability of the mat that permits easy extraction of excess water present in the gypsum slurry during board fabrication (page 11, lines 19-34). Of particular significance is the desirable "hand" of the

present mat and board, which permits easy application of surface finishes (such as paint) to installed board without extensive surface preparation (page 8, lines 5-14 and page 7, lines 11-14). Such benefits are surprisingly absent from boards made from fibers having diameters falling within other narrow ranges that are outside those required by applicant's claims, as set forth in the specification at page 7, lines 27-33. Significantly, Jaffee fails to recognize any of these benefits, which are clearly entirely unexpected and surprising. It is respectfully submitted that the presence of these advantageous benefits, which would not otherwise be obtained, provides ample basis for predicating patentability of claims 1-27 and 29-32 over Jaffee. [“The court in *Soni* summed up the rule of that case as follows: ‘[W]hen an applicant demonstrates *substantially* improved results, as *Soni* did here, and *states* that the results were *unexpected*, this should suffice to establish unexpected results *in the absence* of evidence to the contrary.’ *In re Geisler*, 116 F.3d at 1470, 43 USPQ2d at 1362, 1365 (Fed. Cir. 1997), citing *In re Soni*, 34 USPQ 2d 1684, 1688 (Fed. Cir. 1995).]

With respect to claims 2 and 3, the Examiner has pointed to col. 3, lines 34-40 of Jaffee as teaching that E-type, C-type, T-type, and sodium borosilicate glass fibers are preferred. However, these compositions are disclosed as having an average diameter ranging from about 9 to 20 microns. Accordingly, it is submitted that the compositions disclosed at col. 3, lines 34-40 of Jaffee do not anticipate claim 1, from which claims 2 and 3 depend. As to claim 7, certain disclosures of fiber length at col. 3, lines 55-60 have been cited. The Examiner has indicated that col. 3, lines 54-56 of Jaffee teaches fibers all having the same length; that this disclosure anticipates the recitation in claim 8 of fibers having a fiber length ranging from about 6 to 18 mm. It is respectfully submitted that such

disclosures do not overcome Jaffee's lack of disclosure concerning the about 9.5 to 12.5  $\mu\text{m}$  fiber diameter range, which is required by each of dependent claims 2-3 and 8. For the reasons set forth hereinabove it is submitted that claims 2-3 and 8 patentably define over Jaffee.

As to claims 9-10, Jaffee's teaching of a latex binder comprising a crosslinkable vinyl chloride acrylate copolymer latex (col. 3, lines 60-67) is cited, along with disclosure of an aqueous stearylated melamine emulsion said to act as an external crosslinker (col. 4, lines 14-30). In reference to claims 11-12, an amount of crosslinker in the amount of up to 10 weight percent is said to be taught at col. 4, lines 30-38. Col. 4, lines 15-20 is cited concerning claim 13 as providing the claimed melamine formaldehyde containing resinous binder. As to claim 14, the Examiner has cited Jaffee's disclosure of a glass transition temperature of up to 113°F, which is compared to applicant's recited range of about 15 to 45°C emulsion. Applicant respectfully observes that 15-45°C converts to 59-113°F, rather than the 15-133°F suggested by the Examiner. The purported water repellency effect of stearylated melamine at col. 4, lines 20-25 is cited with respect to claim 15. Jaffee's disclosure at col. 3, lines 18-25 of basis weights of 1.8 to 2.2 pounds per 100 square feet with regard to claims 17 and 18. As to claims 23 and 24, the Examiner has pointed to Jaffee's disclosure that it is known to face a gypsum wall board with a fiber glass non woven mat and the incorporation by reference into Jaffee of US Patent 4,647,496.

In view of the foregoing remarks, it is submitted that a *prima facie* case of anticipation of claims 1-3 and 7-14 has not been established.

As to claim 29, the Examiner has pointed to Jaffee's disclosure of a nonwoven fibrous mat for use as a facer on a gypsum board (col. 2, lines 1-15), the mat comprising a major portion of textile glass fibers and a minor portion of polymer fibers (col. 2, lines 50-60). The Jaffee mat is said to be bound together with a latex (col. 2, lines 35-45). Glass fibers having a length between 0.25 and 1 inch are said to be used (col. 3, lines 55-60), as are fibers with an average diameter ranging from about 9 to 20 microns (col. 3, lines 35-40).

It is respectfully submitted that the same considerations demonstrating lack of a *prima facie* case for anticipation of claim 1 over Jaffee are applicable as well to claim 29. In particular, it is submitted that Jaffee does not disclose (i) the particular fiber diameter range of about 9.5 to 12.5  $\mu\text{m}$  recited by both claims 1 and 29, or (ii) any species falling within that range. As a result, any gypsum board constructed in accordance with the teaching of Jaffee would lack the surprisingly unexpected and highly desirable properties including, *inter alia* a smooth, easily finished surface, exhibited by the mat-faced gypsum board defined by claim 29. Accordingly, it is submitted that claim 29 patentably defines over Jaffee.

With respect to claim 32, the Examiner has stated that the limitation of "hydraulic set" has not been given any patentable weight because the method of making the gypsum board is not germane to the issue of patentability of the product itself. Applicant respectfully submits that the Examiner has misconstrued the term "hydraulic set" used in the preamble of claim 32, which recites a "hydraulic set board." The Examiner's attention is drawn to the usage of the term "hydraulic set" in the specification. For example, at page

6, lines 28-30, it is said that "The present invention provides gypsum board and other hydraulic set and cementitious boards having front and back large surfaces, at least one of which is faced with a non-woven, fibrous mat." At page 12, lines 30-33, applicant states that the invention provides a method for making "gypsum board and other hydraulic set and cementitious board products," thereby establishing "hydraulic set board" as an article of manufacture. Similar usage is found at page 13, lines 21-22. The term "hydraulic set" is expressly defined at page 6, lines 30-33: "By hydraulic set is meant a material capable of hardening to form a cementitious compound in the presence of water. Typical hydraulic set materials include gypsum, Portland cement, pozzolanic materials, and the like." Applicant respectfully submits that a class of materials is thereby defined, and that one of ordinary skill would clearly understand the term "hydraulic set board" used in claim 32 as being a construction board employing one or more of the foregoing materials. It is further submitted that in light of the teaching of the specification, particularly as set forth above, one of ordinary skill would not regard the term "hydraulic set" as being a process limitation, but rather a proper structural definition used in reciting the subject matter of claim 32. Accordingly, it is submitted that the term "hydraulic set board" should be given full patentable weight when examining claim 32 for patentability. Claim 32 is submitted to be patentable over Jaffee for at least the same reasons as claims 1 and 27, including the lack of disclosure or suggestion of (i) the recited range, namely about 9.5 to 12.5  $\mu\text{m}$ , for average fiber diameter, and (ii) any species wherein glass fibers have average diameters within that range.

In view of the amendment of claims 1-8, 22, 29-30, and 32, and the foregoing remarks, it is submitted that claims 1-7, 9, 11-15, 17-21, 23, 25, 27, 29, 31, and 33, as amended, are novel over Jaffee.

Accordingly, reconsideration of the rejection of claims 1-3, 7-15, 17-18, 21-24, 27, 29, and 32 under 35 USC 102(b) as being anticipated by Jaffee is respectfully requested.

Claims 1, 16, and 25 were rejected under 35 USC 102(b) as being anticipated by US Patent 5,308,692 to Kennedy et al., which discloses fiber mats for use as a fire resistant underlayment or facing for materials used in the building and construction industries. The mat comprises a blend of mineral fibers and glass fibers wherein the mineral fibers comprise between 50 and 95 weight percent of the blend of fibers. Col. 2, lines 65-69.

As to claim 1, the Examiner has pointed to disclosure at col. 3, lines 64-69 of a fire resistant mat comprising a blended web of mineral wool fibers and monofilament glass fibers wherein the fibers are bonded by a heat settable fire resistant binder. Glass fibers suitable for the Kennedy et al. mat are said to have a diameter between 10 and 20 microns and a length of about 1.2-4.4 cm (col. 4, lines 43-50).

Applicant respectfully submits that nowhere in the Kennedy et al. reference is there any disclosure or suggestion of non-woven glass fiber mat comprising a web composed of chopped glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ . Instead, the glass fibers are said to have diameters between 10 and 20 microns, as noted by the Examiner, and as recited also by claim 4. Fibers of 15 micron diameter are said to be preferable (col. 4, line 48). Applicant, on the other hand, has found that a board faced with

mat containing fibers of this diameter are substantially less smooth than those of the present board, as taught at page 7, lines 27-33. Moreover, the mat of Kennedy et al. comprises a blend of fibers including both the aforementioned 10-20 micron glass fibers and other fibers such as mineral wool. For example, claim 1 of Kennedy et al. requires the blend to comprise a preponderance (i.e. 50-95%) of mineral fibers, which are not present in any substantial amount in the present mat. Accordingly, it is submitted that the manufacture of the Kennedy et al. mat is inherently more complicated, requiring additional process steps to assure that fibers of the disparate diameters and types required are uniformly blended. Significantly, the diameter of the glass fibers used in the mat species provided by Kennedy et al. is not expressly disclosed. Applicant submits that one of ordinary skill would regard this lack of disclosure as teaching that fibers encompassing the aforementioned 10-20 micron range would have been used, and that the Kennedy et al. patentees did not regard any particular value within that range as being at all critical. Having termed 15 micron fibers preferable, the Kennedy et al. patentees clearly cannot be regarded as having taught any mat comprising fibers with average fiber diameters in applicant's claimed range of 9.5 to 12.5  $\mu\text{m}$  as having been used or preferred. Moreover, all the mat species disclosed by Kennedy et al. employ a blend of fibers; and not fibers having a relatively restricted range of diameters as delineated by claims 1 and 16, and 25 dependent thereon. Reference is drawn particularly to Table 1, wherein the six samples all comprise a blend of 80-90% mineral wool and only 10-20% glass fiber.

As set forth hereinabove in connection with the 102(b) rejection over Jaffee, the restricted range of fiber diameters employed in the present mat and gypsum board results

in a board having a surface that is surprisingly and unexpectedly smooth. Surface finishing, such as painting and the like, is accomplished far more easily and expeditiously. Spackling or related treatments comprising application of a filler substance to level out surface asperities, conventionally required to achieve a satisfactory finish using prior art glass fiber mat faced gypsum boards, are not required in most cases for the board recited by applicant's claims.

For these reasons, and those further set forth above, it is submitted that Kennedy et al. does not disclose or suggest a gypsum board having the outstanding combination of structural and functional properties afforded by the gypsum board recited in present claims 1, 16, and 25.

Accordingly, reconsideration of the rejection of claims 1, 16, and 25 under 35 U.S.C. 102(b) as being anticipated by Kennedy et al. is respectfully requested.

Claims 26 and 31 were rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Jaffee.

As set forth hereinabove in connection with the 102(b) rejection of claims 1-3, 7-15, 17-18, 21-24, 27, 29, and 32 over Jaffee, it is submitted that Jaffee fails to disclose or suggest any gypsum board faced with a mat comprising a web composed of glass fibers having an average fiber diameter ranging from about 9.5 to 12.5  $\mu\text{m}$ , as required by claim 1, from which claim 26 depends, or by claim 29, from which claim 31 depends.

Even less is there any disclosure or suggestion of a gypsum board that would exhibit flame resistance sufficient to pass the test of ASTM Method E84, Class 1, as recited by

claim 26, or a fibrous mat as recited by claim 31 that would have a permeability of at least about 250 cfm/ft<sup>2</sup>, as measured in accordance with ASTM Standard D237. While the Examiner has admitted that there is no explicit disclosure or suggestion in Jaffee of such flame resistance or permeability, she has asserted that such properties may be presumed to be inherent and that the burden is upon applicant to prove otherwise under *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (C.C.P.A. 1980) and *In re Best*, 562 F.2d 1252, 195 USPQ 430 (C.C.P.A. 1977)

Applicant respectfully submits that the Examiner's reliance on *Fitzgerald* and *Best* is misplaced, inasmuch as the factual situation required for those cases to be apposite is not satisfied in the present instance. The Examiner further points to footnote 4 of the *Best* decision for the proposition that a rejection may be made alternatively for obviousness under 35 USC 103 or anticipation by inherency under 35 USC 102. However, the *Best* holding, which was affirmed by *Fitzgerald, supra*, was predicated on the substantial identicality of the claimed and prior art products. [“Where, as here, the claimed and prior art products are identical or substantially identical... the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.” *Best, supra*, at 1255, emphasis added.]. In the present instance, therefore, the gypsum board of claim 26 and the fibrous mat of claim 31 must be substantially identical to the gypsum board and fibrous mat allegedly provided by the Jaffee disclosure for *Fitzgerald* and *Best* to be applicable.

Applicant respectfully traverses any such identification. The Examiner has admitted that Jaffee does not disclose or suggest flame resistance, but instead relies on the presumed

inherency of such a feature in the Jaffee gypsum board. As set forth hereinabove in connection with the 102(b) rejection of claim 1 over Jaffee, gypsum board employing mat comprising chopped glass fibers of the particular diameter range applicant requires is not disclosed or suggested by Jaffee. To the contrary, the preferred diameter ranges and the disclosed species all employ larger diameter fibers. As a result, it is submitted that there are substantial differences between any gypsum board disclosed or suggested by Jaffee and the board recited by claim 1, on which claim 26 depends, precluding application of *Fitzgerald* or *Best* in respect of claim 26.

Even less is there any warrant for applying the *Fitzgerald* or *Best* decisions to claim 31. As set forth hereinabove, Jaffee prefers the use of chopped glass fibers larger in diameter than those recited by claim 29. Moreover, far from being silent as to permeability, Jaffee discloses that mat having a minor portion of glass microfibers (i.e. fibers smaller in diameter than the aforementioned chopped glass fibers) has very small windows that catch very fine particles and provide high efficiency filtration. Applicant thus submits that the finding that a high permeability can be attained in mat comprising fibers of smaller diameters, as delineated by claim 31, as amended, is surprising and unexpected. Such properties are exhibited by exemplary mats of the invention, e.g. as set forth in the Examples of Table 3.

For these reasons, and those set forth above, it is submitted that Jaffee does not disclose or suggest a gypsum board or mat having the outstanding combination of properties afforded by the gypsum board recited by present claim 26 and the mat of claim 31.

Accordingly, reconsideration of the rejection of claims 26 and 31 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Jaffee is respectfully requested.

Claims 4-6, 19, and 20 was rejected under 35 USC 103(a) as being unpatentable over Jaffee. As to claims 4-6, Jaffee is said to teach mat containing a major portion of glass fibers having an average fiber diameter ranging from about 9 to 20 microns (col. 3, lines 35-40) and a minor portion of polyester fibers (abstract). The minor portion can have a diameter of 0.4-2 microns (col. 3, lines 40-47).

As correctly recognized by the Examiner, Jaffee fails to disclose a mat containing glass fibers having a diameter of between about 9.5 and 12.5  $\mu\text{m}$  that comprise: at least about 90% by weight of the glass fibers required by claims 4 and 30; or at least 95% and 97% as delineated by claims 5 and 6, respectively. The Office Action also recognizes the lack of disclosure in Jaffee of a mat having a basis weight of  $1.25 \pm 0.2$  pounds per 100 square feet, as required by claim 19. While applicant certainly agrees that the percentage of glass fibers having a diameter of 9.5-12.5  $\mu\text{m}$  is a result effective variable, applicant strongly disagrees that selection of such a restricted range is obvious in light of Jaffee. In particular, it is submitted that the smoothness of mat comprising glass fibers having a diameter ranging from about 9.5 to 12.5  $\mu\text{m}$  and of gypsum board made therewith is surprising and unexpected, since skilled artisans would have expected such a mat not to be as smooth as mat made with smaller fibers. See page 7, lines 27-33 of the specification. Such surprising and unexpected results, inherent to mats defined by applicant's claims 4-6,

19 and 20, provide ample basis for predicating patentability of those claims over Jaffee. *In re Geisler, supra.*

Accordingly, reconsideration of the rejection of claims 4-6, 19, and 20 under 35 U.S.C. 103(a) as being obvious over Jaffee is respectfully requested.

Claim 20 was rejected under 35 USC 103(a) as being unpatentable over Jaffee in view of US Patent 6,365,533 to Horner, Jr., et al., which relates to a low fiber, plyable facer suitable for use in insulation board manufacture.

Applicant respectfully disagrees with the Examiner's position that Jaffee teaches the invention recited by claim 20, except for disclosure of a second face comprising kraft paper. The structural and functional distinctions between Jaffee's board and the board defined by applicant's claims are set forth hereinabove in connection with the 102(b) rejection of claims 1-3, 7-15, 17-18, 21-24, 27, 29, and 32 over Jaffee. Clearly, Horner, Jr., et al. does not disclose or suggest an average fiber diameter ranging from about 9.5 to 12.5  $\mu$ m. In this respect the Horner, Jr. et al. teaching does not appreciably add to the Jaffee teaching, and cannot be combined therewith to render obvious the board called for by applicant's claims. Inasmuch as Horner, Jr. et al. does not cure the aforementioned deficiencies of Jaffee, its combination therewith does not render obvious the invention of claim 20.

For these reasons, and those set forth above, it is submitted that the proposed combination of Jaffee and Horner, Jr., et al. does not disclose or suggest the gypsum board recited by present claim 20.

Accordingly, reconsideration of the rejection of claim 20 under 35 U.S.C. 103(a) as being obvious over the combination of Jaffee and Horner, Jr., et al. is respectfully requested.

In view of the amendment to claims 1-8, 16, 22, 27, 29-30, and 32, and the foregoing remarks, it is respectfully submitted that the present application has been placed in allowable condition. Reconsideration of the rejection of claims 1-32 and allowance of the present application, as delineated by amended claims 1-27 and 29-32, are, therefore, earnestly solicited.

Respectfully submitted,

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